

WHAT IS CLAIMED IS:

1. A device that is connected with a network, said device comprising:

- 5           a timer that measures elapse of a time period;  
          a network communication module that communicates with another apparatus connecting with the network to provide a specified service;  
          a time acquisition module that acquires an absolute time from  
10 said another apparatus in the process of communication; and  
          a base time setting module that sets the absolute time as a base time for specifying a time at each time point, based on a measurement result of said timer.

15           2. A device in accordance with claim 1, said device further comprising:

- a log recording module that records a log, which represents a working status of said device and is mapped to an elapsed time period since the base time, based on the measurement result of said timer,  
20           wherein said network communication module transmits the log to a predetermined server via the network, and  
          said time acquisition module acquires the absolute time from said predetermined server in the course of transmission.

25           3. A device in accordance with claim 2, wherein said log recording module corrects the elapsed time period by taking into account a time interval specified from absolute times acquired more than once and a measurement result of said timer corresponding to the specified time interval, and records the log.

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4. A device in accordance with claim 2, wherein a time interval of transmitting the log is longer than a time interval of recording the log.

5           5. A device in accordance with claim 2, wherein said network communication module transmits the log with an address dynamically allocated to said device via the network.

6. A device in accordance with claim 2, said device further  
10 comprising:  
        a working status detection module that outputs a continuously varying working status of said device as a discretely varying parameter value,  
        wherein said log recording module records the log at a specific  
15 time interval shorter than a minimum time interval that causes the discrete variation.

7. A management server that manages a working status of a device connecting with a network, said management server  
20 comprising:  
        a log receiver module that receives a log, which represents the working status of said device and is mapped to a time, from said device;  
        a time correction module that corrects the time mapped to the  
25 log by taking into account a time interval specified from reception times of multiple logs and a measurement result of a timer corresponding to the specified time interval; and  
        a log holder module that holds the log mapped to said device.

30           8. A management server in accordance with claim 7, wherein

said device transmits the log at a preset cycle, and

said time correction module corrects the time by regarding the preset cycle as a time interval measured by said timer.

5           9. A management server that manages a working status of a device connecting with a network, said management server comprising:

          a log holder module that holds a quantitative parameter value relating to the working status of said device as a log in a time series;

10       and

          a variation output module that, in response to a reset of the parameter value by an operation of said device, adds a parameter value after the reset to a parameter value immediately before the reset and outputs a time-based variation in working status of said  
15       device over the reset, based on a result of the addition.

          10. A device in accordance with claim 1, said device outputting either of a sound and an image,

          wherein said timer measures a time period since a power ON  
20       time of said device,

          said network communication module receives an output file, which is to be output from said device, and

          said time acquisition module receives the absolute time, which is attached to the output file received by said network communication  
25       module.

          11. A device in accordance with claim 10, wherein said time acquisition module receives a latest update time of the output file, which is received by said network communication module, as the  
30       absolute time.

12. A device in accordance with claim 11, wherein the latest update time represents an absolute time when a client has created the output file.

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13. A device in accordance with claim 11, wherein the output file is transmitted to said device via a predetermined file server, and the latest update time represents an absolute time when said predetermined file server has received the output file.

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14. A device in accordance with claim 10, wherein the absolute time is included in the output file.

15. A device in accordance with claim 1, said device not being equipped with a built-in real time clock, which works even in a power OFF state of said device.

16. A device in accordance with claim 1, said device further comprising:

20 a time specification module that adds the measurement result of said time to the base time and thereby specifies a time at each time point,

wherein said base time setting module resets said timer to zero and updates the base time, in response to acquisition of the absolute time.

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17. A device in accordance with claim 1, wherein said timer is activated at a power ON time of said device and counts a time period since the power ON time as a relative time,

30 said network communication modules transmits data collected

by said device as a report file to a reporting address server, and  
said time acquisition module receives the absolute time from  
said reporting address server, while said network communication  
module transmits the report file to said reporting address server.

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18. A client that creates a print file, which is to be output to a  
printer, said client comprising:

a print file generation module that creates the print file as a  
print job;

10 an absolute time information generation module that generates  
information on an absolute time at a time point when the print file is  
created; and

a transmission module that transmits the created print file and  
the generated information on the absolute time to said printer.

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19. A printing system comprising a client that creates a print  
file and a printer that connects with said client,

said client comprising:

a print file generation module that creates the print file as a  
20 print job;

an absolute time information generation module that generates  
information on an absolute time at a time point when the print file is  
created; and

a transmission module that transmits the created print file and  
25 the generated information on the absolute time to said printer,

said printer comprising:

a timer that is activated at a power ON time of said printer and  
counts a time period since the power ON time as a relative time;

a network communication module that receives the print file  
30 transmitted from said client;

a time acquisition module that receives the information on the absolute time, which is transmitted along with the print file; and

a time specification module that specifies a time at each time point, based on the absolute time received by said time acquisition  
5 module.

20. A device control method that controls a device connecting with a network, said device control method comprising the steps of:

activating a timer included in said device to measure elapse of  
10 a time period;

communicating with another apparatus connecting with the network to provide a specified service;

acquiring an absolute time from said another apparatus in the process of communication; and

15 setting the absolute time as a base time for specifying a time at each time point, based on a measurement result of said timer.

21. A management method that causes a management server to manage a working status of a device connecting with a network, said  
20 management method comprising the steps of:

receiving a log, which represents the working status of said device and is mapped to a time, from said device;

correcting the time mapped to the log by taking into account a time interval specified from reception times of multiple logs and a  
25 measurement result of a timer corresponding to the specified time interval; and

holding the log mapped to said device.

22. A management method that causes a management server to  
30 manage a working status of a device connecting with a network, said

management method comprising the steps of:

holding a quantitative parameter value relating to the working status of said device as a log in a time series; and

in response to a reset of the parameter value by an operation of said device, adding a parameter value after the reset to a parameter value immediately before the reset and outputting a time-based variation in working status of said device over the reset, based on a result of the addition.

23. A recording medium in which a computer program for controlling a device connecting with a network is recorded, said computer program comprising:

a first program code that activates a timer included in said device to measure elapse of a time period;

a second program code that communicates with another apparatus connecting with the network to provide a specified service;

a third program code that acquires an absolute time from said another apparatus in the process of communication; and

a fourth program code that sets the absolute time as a base time for specifying a time at each time point, based on a measurement result of said timer.

24. A recording medium in which a computer program for causing a management server to manage a working status of a device connecting with a network is recorded, said computer program comprising:

a first program code that receives a log, which represents the working status of said device and is mapped to a time, from said device;

a second program code that corrects the time mapped to the log

by taking into account a time interval specified from reception times of multiple logs and a measurement result of a timer corresponding to the specified time interval; and

a third program code that holds the log mapped to said device.

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25. A recording medium in which a computer program for causing a management server to manage a working status of a device connecting with a network is recorded, said computer program comprising:

10 a first program code that holds a quantitative parameter value relating to the working status of said device as a log in a time series; and

a second program code that, in response to a reset of the parameter value by an operation of said device, adds a parameter  
15 value after the reset to a parameter value immediately before the reset and outputs a time-based variation in working status of said device over the reset, based on a result of the addition.